

16. NOTES ON HOST-PLANTS, FEEDING BEHAVIOUR,
INFESTATION AND ANT ATTENDANCES OF COTTON APHIDS
APHIS GOSSYPHII GLOV.

Behura (1963, 1965) reported the occurrence of *A. gossypii* in India on as many as 142-plants belonging to different families. Since then 20 more have been added to the list (Behura and Roy 1980).

The principal crops which are usually attacked by these cosmopolitan polyphagous aphid species are cotton, brinjal, chilli, melon and bhendi. Eastop (1961) reported as many as 60 host-plants of *A. gossypii* in Africa. According to our survey the total number of host-plants throughout the world comes to not less than 220 belonging to 46 families. The distribution of aphid on plant species in all the families are enlisted in Table 1. Families

TABLE 1

NUMBER OF PLANT SPECIES OF DIFFERENT FAMILIES
INFESTED BY *Aphis gossypii* GLOVER

Sl. Nos.	Name of the families	Number of species of plants infested by <i>A. gossypii</i>
1.	Araliaceae	1
2.	Apocynaceae	2
3.	Violaceae	1
4.	Fabaceae	10
5.	Vitaceae	1
6.	Verbenaceae	9
7.	Asteraceae	22
8.	Solanaceae	30
9.	Araceae	3
10.	Cucurbitaceae	19
11.	Acanthaceae	3
12.	Chenopodiaceae	1
13.	Dipterocarpaceae	1
14.	Rosaceae	4
15.	Euphorbiaceae	5
16.	Annonaceae	1
17.	Apiaceae	2
18.	Myrtaceae	2

Sl. Nos.	Name of the families	Number of species of plants infested by <i>A. gossypii</i>
19.	Oxalidaceae	1
20.	Lamiaceae	5
21.	Malvaceae	17
22.	Lythraceae	3
23.	Rubiaceae	3
24.	Balsammaceae	1
25.	Convolvulaceae	2
26.	Ulmaceae	1
27.	Capparidaceae	3
28.	Iridiaceae	1
29.	Moraceae	5
30.	Commelinaceae	2
31.	Tiliaceae	2
32.	Boraginaceae	1
33.	Amaranthaceae	2
34.	Bersaraceae	1
35.	Cannabinaceae	1
36.	Nyctaginaceae	2
37.	Polygonaceae	2
38.	Cannaceae	1
39.	Punicaceae	1
40.	Urticaceae	1
41.	Brassicaceae	1
42.	Bignoniaceae	1
43.	Rutaceae	6
44.	Caesalpiniaceae	2
45.	Zingiberaceae	1
46.	Asclepiadaceae	2

with the largest number of plants infested by the aphids are in the following order:- Solanaceae (30 species), Asteraceae (22 species), Cucurbitaceae (19 species), Malvaceae (17 species) and Fabaceae (10 species).

Feeding in the aphid species has been observed althrough day and night on brinjal plants (*Solanum melongena*). They anchor themselves by inserting the beak (rostrum) into the plant tissue and occur on different parts of the plant

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although the greatest concentration is noticed on the foliage. At the time of feeding plant sap a sort of rhythmic jerk is exhibited by them. Mostly feeding is observed on the under-surface of leaf indicating thereby their avoidance of direct sunlight.

All aerial parts of the brinjal or egg plant are prone to the attack of *A. gossypii*. The upper side of the leaf is more hairy and remains exposed to sunlight while the lower side is less hairy and dark. Aphids invariably are marked on lower surface. In case of acute infestation the aphids are found on the petioles, flowers, buds or base of fruit. In severe infestation a single leaf (average surface area of 187 sq. cm.) was observed to hold as many as 400 aphids (including adult and immature ones). Infestation on very young brinjal plant is noticed when the plant has 2-3 leaves on its axis. The aphids are noticed in very negligible numbers on old or senescing leaves. At Bhubaneswar (Orissa) these aphid species are found almost throughout the year, heaviest infestation occurring during either September-November or March-

April depending on early or late sown crops. Aphids usually prefer the plant at their flowering and fruiting stages.

A. gossypii is a myrmecophilous type of aphid species attended by ant species i.e. *Camponotus (Tanaemyrmex) compressus* Fabr. reported by Behura, 1965. But later on 3 more have been added to the list all belonging to subfamily Myrmecinae (Roy and Behura 1980).

They are (1) *Bothriomyrmex dalyi* Fabr. (2) *Meranoplus bicolor* Guer. (3) *Solenopsis geminata* Fabr.

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